Colima Construction Office Building
1568 SE 3rd Court
Canby, Oregon
Preliminary Stormwater Report

Date:	August 2021
Client:	Colima Construction LLC
Engineering Contact:	John Raugust, PE
Engineering Firm:	AKS Engineering & Forestry, LLC 12965 SW Herman Road Suite 100 Tualatin, OR 97062
AKS Job Number:	8639

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Appendices

Preliminary Stormwater Report

1568 SE 3RD COURT, CANBY, OREGON

1.0 Purpose of Report

The purpose of this report is to document the criteria the planned private stormwater system was designed to meet, identify the sources of information on which the analysis was based, detail the design methodology, and document the results of the analysis.

2.0 Project Location/Description

The subject site is located on Tax Lot 3800 of Clackamas County Assessor's Map 3S 1E 34C, at 1568 SE 3rd Court, Canby Oregon, 97013. Currently, the site drains to the northwest and southwest. The stormwater runoff from the developed site will be routed to an on-site stormwater facility, located in the eastern portion of the project site for retention and infiltration. The developed area of the subject site is approximately ±0.37 acres.

3.0 Regulatory Design Criteria

3.1 STORMWATER INFILTRATION CRITERIA

The private infiltration rain garden will provide stormwater infiltration management per the Clean Water Services (CWS) Low Impact Development Approaches (LIDA) Handbook, July 2009, and the City of Canby requirements, including:

- Retention and infiltration of the stormwater runoff from impervious area up to the 10-year storm event (3.5 inches in 24 hours).

4.0 Design Methodology

The Santa Barbara Urban Hydrograph (SBUH) method was utilized to design and size the private infiltration rain garden. The SBUH method utilizes the Soil Conservation Service (SCS) Type 1A 24-hour storm, as defined by the King County, Washington, Surface Water Design Manual. HydroCAD computer software aided in the analysis. Representative CN numbers were obtained from the King County, Washington, Surface Water Design Manual.

5.0 Design Parameters

5.1 INFILTRATION RATE

A geotechnical engineering study and standpipe falling head method of infiltration testing were conducted on the site by GeoPacific Engineering Inc. Based on infiltration test results from the Geotechnical Engineering Report, dated May 10, 2021, (Appendix E) the average infiltration rate in the area of the new private infiltration rain garden is 3.75 inches per hour at 8 feet of depth. A conservative estimate of 1.875 inches per hour (safety factor of 2) was utilized in this report for sizing the private infiltration rain garden.

5.2 DESIGN CRITERIA

Stormwater runoff from all new impervious areas will be routed to the new private infiltration rain garden (see calculations in the appendix). This private infiltration rain garden has been sized to retain and infiltrate the stormwater runoff from all new impervious areas, up to the 10-year storm event (3.5 inches in 24 hours).

5.3 EMERGENCY OVERFLOW

In the event that the private infiltration rain garden becomes plugged or for some other reason cannot adequately infiltrate the stormwater, the stormwater will flow into the emergency overflow structure (ditch inlet), through the private stormwater main, to the emergency outfall. This outfall was placed at the City specified location, on the northerly adjacent taxlot (tax lot 100, tax map 3S1E34C – City owner parcel).